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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,705	12/02/2004	Takahito Hara	3056 USOP	1003

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EXAMINER	
BRISTOL, LYNN ANNE	

ART UNIT	PAPER NUMBER
1643	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,705	HARA ET AL.	
	Examiner	Art Unit	
	Lynn Bristol	1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64 and 71-76* is/are pending in the application.

4a) Of the above claim(s) *1-11, 13-64* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12 and 71-76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-64 and 71-76 are all the pending claims in the application.

2. Claim 12 was amended, Claims 65-70 were cancelled and new Claims 71-76 were added in the Response of 10/15/07.

3. Claims 1-11 and 13-64 are withdrawn from examination.

4. Claims 12 and 71-76 are all the pending claims under examination for this application.

5. Applicants amendments to the claims have necessitated new grounds for objection and rejection. **This action is FINAL.**

Withdrawal of Objections

Specification

6. The objections to the specification are withdrawn:

a) The specification has been amended to cross-reference the priority documents on p. 2 of the amendments to the specification.

Applicants' comments on p. 17 of the Response of 10/15/07 are acknowledged.

b) The trademarks e.g., polysorbate 80™ Triton X- 100™, have been amended to properly cite the trademark on pp. 2-4 of the amendments to the specification.

Applicants' comments on p. 17 of the Response of 10/15/07 are acknowledged.

Withdrawal of Rejections

Claim Rejections - 35 USC § 112, second paragraph

7. The rejection of Claim 12 as being indefinite as to whether the drug is to be selected on the basis of cancer cell susceptibility to the drug measured by increased or decreased cell proliferation is withdrawn.

Applicants amendment of Claim 12 to recite that suppression of cancer cell proliferation in the presence of an antiandrogen drug candidate that also does not induce drug-resistance within at least 3 months of culturing, overcomes the rejection.

Applicants' comments on p. 17 of the Response of 10/15/07 are acknowledged.

8. The rejection of Claim 12 for the recitation "having...little potential to induce resistant cancer" is withdrawn in view of the amendment of the claim to delete the recitation.

Applicants' comments on p. 17 of the Response of 10/15/07 are acknowledged.

9. The rejection of Claim 12 in lacking antecedent basis for the limitation "said conditions" is withdrawn in view of the amendment of the claim to delete the recitation.

Applicants' comments on p. 17 of the Response of 10/15/07 are acknowledged.

Claim Rejections - 35 USC § 102

10. The rejection of Claim 12 under 35 U.S.C. 102(a) as being anticipated by Hara et al. (Cancer Research 63:149-153 (1/1/03); cited in the IDS of 9/18/06) is withdrawn.

Applicants have perfected their claim to priority under 35 U.S.C. 119(a)-(d) within the time period set in 37 CFR 1.55(a)(1) by submission of a certified copy of priority application JP 2002-255612 (filed 8/30/02) on 12/2/04 [Applicants erroneously state the

submission date as 2/12/04 on p. 17 of the Response of 10/15/07] and a certified translation of the priority document on 10/15/07. Applicants have antedated the Hara reference and overcome the rejection.

11. The rejection of Claim 12 under 35 U.S.C. 102(b) as being anticipated by Long et al (Can. Res. 60:6630-6640 (2000)) is withdrawn.

The amendment of Claim 12 to recite that the culture period for the screening method is "for at least three months" overcomes the rejection. As alleged by Applicants on p. 18 of the Response of 10/15/07, Long teaches drug screening in cancer cells cultured for nine days.

12. The rejection of Claim 12 under 35 U.S.C. 102(b) as being anticipated by Foury et al (J. Steroid Biochem. Molec. Biol. 66:235-240 (1998)) is withdrawn.

The amendment of Claim 12 to recite that the culture period for the screening method is "for at least three months" overcomes the rejection. As alleged by Applicants on p. 18 of the Response of 10/15/07, Foury teaches drug screening in cancer cells cultured for seven days.

Claim Rejections - 35 USC § 103

13. The rejection of Claim 12 under 35 U.S.C. 103(a) as being unpatentable over Taplin et al. (Cancer Research, (1999), pp. 2511-2515, Vol. 59, No. 11; cited in the IDS

of 12/2/04) in view of Joly-Pharaboz et al (J. Steroid Biochem. Molec. Biol. 55:67-76 (1995)) is withdrawn.

The amendment of Claim 12 to recite that the culture period for the screening method is "for at least three months" overcomes the rejection. As alleged by Applicants on pp. 19-20 of the Response of 10/15/07, neither Taplin or Joly-Pharaboz teach or suggest alone or in combination drug screening in cancer cells cultured for at least three months.

New Grounds for Objection

Claim Objections

14. Claims 72 and 76 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 72 and 76 are drawn to identical subject matter- "wherein said cancer cells are human prostate cancer cells" and Claim 76 depends from Claim 72.

New Grounds for Rejection

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 73 and 75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 73 recites the limitation "said cancer cells" in line 5. There is insufficient antecedent basis for this limitation in the claim. It is not clear from the claim if "a cell comprising a leucine or cysteine substitution for tryptophan at amino acid number 746 of SEQ ID NO: 2" would inherently and necessarily be a cancer cell.

b) Claim 75 depends from Claim 72 and is not further limiting but recites a broadening limitation. Claim 72 is drawn to human prostate cancer cells and Claim 75 broadens the limitation to "cancer cells are human cancer cells."

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Written Description/New Matter

16. Claims 12, 71, 72 and 74-76 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain new subject matter, which was not described in the specification.

The claims are drawn to a method for screening antiandrogen drugs that do not induce drug-resistance comprising culturing cells of an androgen-sensitive cancer in the presence of the test substance for "*at least three months*".

The specification discloses at p. 69, lines 11-14:

> "When a known antiandrogen drug (for example, bicaltamide, flutamide, and the like) is used in the production method of the present invention for a mutant AR-expressing cancer cell line, an antiandrogen drug-resistant line expressing a mutant AR can be established *at latest in about 3 months or so*." (Examiner's italics added)

The disclosure cannot in any way be interpreted as providing literal or implicit support for the instant claimed recitation. The disclosure in fact contradicts the instant recitation because the specification teaches that "at latest" or by no later than 3 months or so, would an antiandrogen drug-resistant line be established in culture. The instant claims recite a culture period of with a lower limit of "*at least 3 months*" with *no upper limit*. No literal support for culture conditions of "*at least 3 months*" are even contemplated in the original specification much less the English language priority document. The only other support for any other duration of a culture period appears in Example 1 of the specification where Applicants teach that cancer cells were cultured in the presence of bicaltamide and in which two drug-resistant, proliferating clones were identified after 6 to 13 weeks in culture. Applicants are required to identify by showing of the exact page, paragraph and line number in the original filed application and/or the priority document where a cancer cell should be cultured "*for at least 3 months*" in the presence of an antiandrogen test substance in order to identify a drug that a) suppresses proliferation of the cancer cell and b) does not induce antiandrogen drug-resistance. Therefore, based on the foregoing available evidence one skilled in the art would reasonably conclude that the specification does not support a method where cells are cultured for "at least three months" and that Applicants were not in possession of the instant claimed invention method.

Biological Deposit Requirement

17. Claim 73 is rejected under 35 U.S.C. § 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention, because the specification does not provide evidence that the claimed biological materials are (a) known and readily available to the public; (b) reproducible from the written description.

a. It is unclear if a cancer cell line which comprises a leucine or cysteine substitution for tryptophan at amino acid number 746 of SEQ ID NO:2 (human androgen receptor) is known and publicly available, or can be reproducibly isolated without undue experimentation. Applicants' specification discloses identifying a mutated androgen receptor at position 746 where the substitution from a tryptophan to leucine or cysteine confers bacalutimide resistance (p. 74, lines 1-8). Further it is not clear if Applicants intend that the mutated AR should be subcloned into an expresison vector and transfected into a host cell for use in the assay system. If so, then it is not clear which expression system is preferred in order to perform the assay procedure. Therefore, a suitable deposit of the original cell line containing the AR mutation *or* a vector containing the cDNA encoding the mutant AR *or* a cell line transfected with an expression vector encoding the mutant AR for patent purposes is suggested. Without a publicly available deposit of the above founder cell line, vector or vector-transfected cell line, one of ordinary skill in the art could not be assured of the ability to practice the invention as claimed. Exact replication of the instant claimed cell line is an unpredictable event.

If the deposit is made under the provisions of the Budapest Treaty, filing of an affidavit or declaration by applicant or assignees or a statement by an attorney of record who has authority and control over the conditions of deposit over his or her signature and registration number stating that the deposit has been accepted by an International Depository Authority under the provisions of the Budapest Treaty and that all restrictions upon public access to the deposited material will be irrevocably removed upon the grant of a patent on this application. This requirement is necessary when deposits are made under the provisions of the Budapest Treaty as the Treaty leaves this specific matter to the discretion of each State.

If the deposit is not made under the provisions of the Budapest Treaty, then in order to certify that the deposits comply with the criteria set forth in 37 CFR 1.801-1.809 regarding availability and permanency of deposits, assurance of compliance is required. Such assurance may be in the form of an affidavit or declaration by applicants or assignees or in the form of a statement by an attorney of record who has the authority and control over the conditions of deposit over his or her signature and registration number averring:

(a) during the pendency of this application, access to the deposits will be afforded to the Commissioner upon request:

(b) all restrictions upon the availability to the public of the deposited biological material will be irrevocably removed upon the granting of a patent on this application:

(c) the deposits will be maintained in a public depository for a period of at least thirty years from the date of deposit or for the enforceable life of the patent of or for a

period of five years after the date of the most recent request for the furnishing of a sample of the deposited biological material, whichever is longest; and

(d) the deposits will be replaced if they should become nonviable or non-replicable.

Amendment of the specification to recite the date of deposit and the complete name and address of the depository is required. As an additional means for completing the record, applicant may submit a copy of the contract with the depository for deposit and maintenance of each deposit.

If a deposit is made after the effective filing date of the application for patent in the United States, a verified statement is required from a person in a position to corroborate that the biological material described in the specification as filed is the same as that deposited in the depository, stating that the deposited material is identical to the biological material described in the specification and was in the applicant's possession at the time the application was filed.

Applicant's attention is directed to In re Lundak, 773 F.2d. 1216, 227 USPQ 90 (CAFC 1985) and 37 CFR 1.801-1.809 for further information concerning deposit practice.

Conclusion

18. No claims are allowed.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynn Bristol whose telephone number is 571-272-6883. The examiner can normally be reached on 8:00-4:00, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LAB

/Larry R. Helms/
Supervisory Patent Examiner